

## **Article 5: Building Regulations**

### **Division 4: Additional Building Regulations for Archaic Materials and Methods of Construction**

*(Added 12-9-1997 by O-18451 N.S.; effective 1-1-2000.)*

#### **§145.0401 Purpose of the Archaic Materials and Methods of Construction Regulations**

The purpose of this division is to promote public safety and welfare by identifying potential hazards associated with unreinforced masonry bearing wall buildings that meet the requirements as described by this division and by establishing a voluntary mitigation program with some mandatory aspects for these buildings. Buildings that have unreinforced masonry bearing walls are widely recognized for sustaining life-hazardous damage as a result of partial or complete collapse during moderate to strong earthquakes.

The technical provisions of this division establish minimum standards for structural seismic resistance, primarily to reduce the risk of loss of life or injury, but which will not necessarily prevent loss of life or injury or prevent earthquake damage to an existing building that complies with these standards.

This division provides systematic procedures and standards for identification and classification of unreinforced masonry bearing wall buildings based on their present use.

*(Amended 6-12-2001 by O-18949 N.S.)*

#### **§145.0402 When the Archaic Materials and Methods of Construction Regulations Apply**

Except as provided in Section 145.0403, the provisions of this division apply to buildings constructed or under construction before March 24, 1939, or for which a Building Permit was issued before March 24, 1939, and to City-owned buildings designated pursuant to Council resolution, which on January 1, 1994, had at least one Unreinforced Masonry Bearing Wall as defined in this division.

*(Added 12-9-1997 by O-18451 N.S.; effective 1-1-2000.)*

**§145.0403 Exemptions from the Archaic Material and Methods of Construction Regulations**

This division shall not apply to the following:

- (a) Any detached single or two-family dwelling unit and detached apartment houses containing five or fewer units used solely for residential purposes and the accessory buildings for these occupancies. The exemption does not apply to buildings or structures containing mixed or nonresidential occupancies.
- (b) Buildings that have been completely seismically retrofitted to comply with earlier editions of these regulations as provided in San Diego Municipal Code Chapter 9, Division 88, (Archaic Materials and Method of Construction), or equivalent, before January 1, 2000. Complete seismic retrofit shall be as determined by the Building Official.

*(Amended 6-12-2001 by O-18949 N.S.)*

**§145.0404 Definitions for this Division Only**

The following definitions apply to this division:

*Building* for the purpose of determining occupant load, means any contiguous or interconnected structure and for the purpose of engineering evaluation, means the entire structure or any portion thereof that will respond to seismic forces as a unit.

*Building Collapse or Partial Collapse* means the condition brought about by inadequate resistance to loading in which the actual structure of a building, including *External Hazards*, whether entire or localized, gives way internally, or onto lower adjacent buildings (with a minimum height differential of 6 feet) or onto an adjacent exit or public way.

*Building Maintenance* means the act or process of applying preservation treatments to a building or structure . It includes housekeeping; routine and cyclic work scheduled to mitigate wear and deterioration without altering the appearance of the building or structure; and the repair or replacement in kind of broken or worn-out elements, parts, or surfaces to keep the existing appearance . Building maintenance includes stabilization work necessary to protect damaged historic fabric from additional damage and the actions taken to prevent damage and minimize deterioration of an object by practicing preventive conservation or by performing a suitable treatment on the object itself.

*Cumulative Value of Remodel or Renovation* means the *Value of Remodel or Renovation* accumulated from January 1, 2001 to the date an event regulated by this division occurs. The Cumulative Value of Remodel or Renovation shall exclude the value of any nonstructural tenant improvements made or performed subsequent to the date a building owner provides floor-to-wall and roof-to-wall anchors under Section 145.0411.

*Date of Service* means the date the Building Official served an order requesting compliance with this division to an owner of a building either in person or by deposit in the U.S. Mail, postage prepaid and certified return requested.

*Essential Facility* means any building or structure classified in Occupancy Category I of Table 16-K of the 2001 California Building Code adopted by the City.

*Existing Use or Occupancy* means any use or occupancy that was legally established in a building at any time since its original construction.

*External Hazards* means objects attached to or located on the roof structure or forming the exterior facade of a building that have the potential to give way internally or onto lower adjacent buildings (with a minimum height differential of 6 feet) or onto an adjacent exit or public way. Examples include nonstructural exterior wall panels such as masonry infill or decorative precast concrete, parapets, masonry chimneys, tile roofing, fire escapes or balconies, tanks and masonry, or stone wall veneers and wall ornamentation.

*Hazard Category* means the ranking assigned a use or occupancy as determined under Table 145-05A of Section 145.0427 and based on degree of probable risk of loss of life or injury due to a seismic event.

*Hazardous Facility* means any building or structure classified in Occupancy Category II of Table 16-K of the 2001 California Building Code adopted by the City.

*Historical Building* means any qualified Historical Building as defined by the State Historical Building Code (SHBC) under California Health and Safety Code sections 18950-18960. Historical Building includes any structure, collection of structures, historical landscape, artifacts, objects and their associated sites, and historic districts deemed of importance to the history, architecture, or culture of an area by an appropriate local, state, or federal governmental jurisdiction. Historical Building also includes designated contributing buildings listed in a historical district; structures on official federal, state, or local historical registers or official inventories, such as the National Register of Historic Places, State Historical Landmarks, State Points of Historical Interest; and officially adopted City or county registers or inventories of

historical or architecturally significant sites, places, or landmarks. Structures included in inventories submitted to the Office of Historic Preservation shall be treated as Historical Buildings if they have been evaluated by the Office and given any rating other than ineligible.

*Remodel or Renovation* means any work requiring a permit pursuant to Sections 129.0202 and 129.0203 including additions; alterations; interior improvements; electrical, mechanical, and plumbing upgrading or replacement; or structural upgrading or replacement.

*Retrofit Guideline Document* means a document developed by the owner of a building detailing plans for a complete seismic retrofit of the building according to the technical provisions of this division.

*Seismic Retrofit (Complete)* means the mitigation of any deficiencies found to exist in the building's lateral force-resisting system that could potentially cause collapse or partial collapse failure.

*Structural Survey and Engineering Report* means the investigation and subsequent preparation of a report by a civil or structural engineer or architect licensed in the State of California, which addresses the existence, nature, and extent of structural deficiencies that could result in collapse or partial collapse of a building and the existence, nature, and extent of deficiencies in the anchoring of external hazards.

*Unreinforced Masonry Bearing Wall* is defined in the 1991 Edition of the Uniform Code for Building Conservation (UCBC) Appendix Chapter 1, a copy of which is on file in the office of the City Clerk as Document No. OO-17773-3.

*Value of Remodel or Renovation* means the valuation of work, requiring a permit, that is obtained by using the building valuation schedule administered by the Building Official for tenant improvements, additions or alterations in effect at the time of permit issuance or other evidence satisfactory to the Building Official of the valuation of work, whichever is less. If unpermitted work, for which a permit was required, is discovered after January 1, 2001, the valuation of the work is obtained by using the current building valuation schedule administered by the Building Official for tenant improvements, additions or alterations.

*Value of the Building* means the valuation of the building itself, obtained using the building valuation schedule administered by the Building Official at the time of construction or an appraisal certified by a member of a recognized appraisal institute, whichever is greater.

(Amended 9-24-2002 by O-19102 N.S.)

**§145.0405 General Regulations for Archaic Materials and Methods of Construction**

- (a) When structural seismic upgrading is required or is being voluntarily provided, the building elements regulated by this division shall be those listed in Table No. A-1-A of the UCBC Appendix Chapter 1.
- (b) In addition to the requirements set forth in this division, the provisions of the 2001 California Building Code, Chapter 34, shall also apply to alterations or additions made to buildings within the scope of this division.
- (c) This division does not require alteration of existing electrical, plumbing, mechanical, or fire safety systems unless their condition will cause the building to be classified as a dangerous building under Section 121.0404. If the building is declared dangerous, abatement of the dangerous condition shall be initiated under Chapter 12, Article 1, Division 4 ( Procedures for Abatement of Unsafe, Dangerous, or Substandard Buildings or Structures).
- (d) Except as specifically provided for by 2001 California Building Code, Chapter 34, alterations performed solely to achieve compliance with the requirements of this division, or the value of such alterations, or both, shall not subject the owner to compliance with other provisions of the San Diego Municipal Code, such as Section 142.0610.
- (e) For archaic material design values, refer to Sections A103 through A113.6 of the UCBC Appendix Chapter I, including all tables and figures.
- (f) The technical provisions established by Section 145.0405(e) do not apply to the strengthening of Essential or Hazardous Facilities when located in Seismic Zone Nos. 3 or 4.
- (g) Methods of analysis and design, the design values themselves, and the materials and methods of construction must be in accordance with the 2001 California Building Code as adopted by the City, except as modified by this division.

- (h) Alternate materials, designs, or methods of construction may be approved and their use authorized by the Building Official in accordance with the provisions of Section 129.0109. The proposed materials, designs, or methods of construction must comply with the purposes of this division and be for the use intended.

*(Amended 9-24-2002 by O-19102 N.S.)*

**§145.0406 Regulations for Essential or Hazardous Facilities**

- (a) The regulations of this section apply to essential or hazardous facilities, described as any building or structure within the scope of this division and classified in Occupancy Category 1 or 2 of Table 16-K of the 2001 California Building Code adopted by the City.
- (b) The Building Official may serve an order to comply with this division in accordance with Sections 145.0413, 145.0414, and 145.0415.
- (c) The order shall require preparation of a Structural Survey and Engineering Report of the building to be completed in accordance with Sections 145.0418, 145.0419, 145.0420, and 145.0421.
- (d) If the Structural Survey and Engineering Report shows that the building meets the requirements of the State Historical Building Code, if applicable, or the 2001 California Building Code as adopted by the City for new buildings of the same occupancy category, no further action is required.
- (e) If it does not, the owner shall prepare and submit a Retrofit Guideline Document to the Building Official, in accordance with the provisions of Section 145.0424.
- (f) The owner shall either demolish or strengthen the building to meet the technical provisions of the Retrofit Guideline Document within 5 years from the date of service of the order.

*(Amended 9-24-2002 by O-19102 N.S.)*

**§145.0407 Regulations for Remodels Exceeding 100 Percent of Valuation**

- (a) The regulations of this section apply to buildings within the scope of this division that meet the following conditions:
  - (1) The buildings are not classified in Occupancy Category 1 or 2 of Table 16-k of the 2001 California Building Code; and

- (2) The Cumulative Value of Remodel or Renovation excluding the cost of seismic retrofit or the removal stabilization or bracing of External Hazards, exceeds 100 percent of the value of the building within any 5-year period after January 1, 2001.
    - (A) The 100 percent value shall exclude the value of any nonstructural tenant improvements made or performed after the date a building owner provides floor-to-wall and roof-to-wall anchors under this section;
    - (B) The value of the remodel is the value of work requiring a permit that is obtained by using the building valuation schedule administered by the Building Official for tenant improvements, additions, or alterations in effect at the time of permit issuance, or other evidence satisfactory to the Building Official, whichever is less.
    - (C) If unpermitted work, for which a permit was required, is discovered after January 1, 2001, the valuation of the work is obtained by using the current building valuation schedule administered by the Building Official.
- (b) The Building Official may serve an order to comply with this division in accordance with Sections 145.0413, 145.0414, and 145.0415.
- (c) The order shall require preparation of a Structural Survey and Engineering Report of the building to be completed in accordance with Sections 145.0418, 145.0419, 145.0420, and 145.0421.
- (d) If the Structural Survey and Engineering Report shows that the building meets the requirements of the State Historical Building Code, if applicable, or the 2001 California Building Code as adopted by the City for new buildings of the same occupancy category, no further action is required.
- (e) If it does not, the owner shall prepare and submit a Retrofit Guideline Document to the Building Official, in accordance with the provisions of Section 145.0424.

- (f) The time schedule shall specify completion dates for each phase of the seismic retrofit with the final date for completion of all items listed in the Structural Survey and Engineering Report to be a maximum of 10 years from the date of permit issuance for the portion of remodeling or renovation whose cost exceeds 100 percent of the value of the building.

*(Amended 9-24-2002 by O-19102 N.S.)*

**§145.0408 Regulations for Change to a Higher Hazard Category**

- (a) The regulations of this section apply to buildings within the scope of this division that (1) are not classified in Occupancy Category 1 or 2 of Table 16-k of the 2001 California Building Code, and (2) if more than 33 percent of the total floor area of the building changes from an Existing Use or Occupancy to a Higher Hazard category use or occupancy as determined by Table 145-05A of Section 145.0427, except as provided in 145.0408(b).
- (b) If the use or occupancy of part or all of a building is changed to a higher relative hazard as determined by Table 145-05A, but the occupant load of the building is not increased, the building's hazard category will still be considered unchanged and the following regulations do not apply.
- (c) A Board of Appeals application must be completed and recorded to ensure that subsequent owners adhere to the required base load.
- (d) The Building Official may serve an order to comply with this division in accordance with Sections 145.0413, 145.0414, and 145.0415.
- (e) The order shall require preparation of a Structural Survey and Engineering Report of the building to be completed in accordance with Sections 145.0418, 145.0419, 145.0420, and 145.0421.
- (f) If the Structural Survey and Engineering Report shows that the building meets the requirements of the State Historical Building Code, if applicable, or the 2001 California Building Code as adopted by the City for new buildings of the same occupancy category, no further action is required.
- (g) If it does not, the owner shall prepare and submit a Retrofit Guideline Document to the Building Official, in accordance with the provisions of Section 145.0424.



- (h) The time schedule shall specify completion dates for each phase of the seismic retrofit with the final date for completion of all items listed in the Structural Survey and Engineering Report to be a maximum of 10 years from the date of change of use or occupancy to a higher hazard category.

*(Amended 9-24-2002 by O-19102 N.S.)*

**§145.0409 Regulations for Unsafe Buildings Within the Scope of this Division**

- (a) If the building is declared structurally unsafe, abatement of the unsafe condition shall be initiated in accordance with Chapter 12, Article 1, Division 4 (Procedures for Abatement of Unsafe, Dangerous or Substandard Structures).
- (b) The Building Official may serve an order to comply with this division in accordance with Sections 145.0413, 145.0414, and 145.0415.
- (c) The order shall require preparation of a Structural Survey and Engineering Report of the building to be completed in accordance with Sections 145.0418, 145.0419, 145.0420, and 145.0421.
- (d) If the Structural Survey and Engineering Report shows that the building meets the requirements of the State Historical Building Code, if applicable, or the 2001 California Building Code as adopted by the City for new buildings of the same occupancy category, no further action is required.
- (e) If it does not, the owner shall prepare and submit a Retrofit Guideline Document to the Building Official, in accordance with the provisions of Section 145.0424.

*(Amended 9-24-2002 by O-19102 N.S.)*

**§145.0410 Regulations for Buildings Not Classified as Essential or Hazardous Facilities**

- (a) The regulations of this section apply to buildings that are within the scope of this division and are not classified in Occupancy Category 1 or 2 of Table 16-K of the 2001 California Building Code, and that contain any parapets and other exterior wall or roof appendages or objects attached to or located on the roof structure or forming the exterior facade of a building that meet both of the following criteria:

- (1) Critical Placement. Where the parapets, exterior wall, roof appendages, or any other external objects have the potential to give way internally or onto lower adjacent buildings (with a minimum height differential of 6 feet) or property, or onto an adjacent exit or public way; and
  - (2) Relative Height. Where the parapets and other External Hazards or exterior wall or roof appendages that extend above the lower of either the level of the closest adjacent roof-to-wall anchors or the roof sheathing do not meet the requirements of Sections A113.1 and A113.6 of the 1997 UCBC Appendix Chapter 1.
- (b) Examples include nonstructural exterior wall panels such as masonry infill or decorative precast concrete, parapets, masonry chimneys, tile roofing, fire escapes or balconies, tanks and masonry or stone wall veneers and wall ornamentation.
  - (c) The owner of a building regulated by this section shall, within 5 years after the Date of Service of an order to comply, provide partial seismic mitigation in the form of the removal, stabilization, or bracing of all the building elements that meet both of the criteria of Section 145.0410(a) (1) and (2).
  - (d) The removal, stabilization, and bracing process shall include the provision of roof-to-wall anchors around the perimeter of the entire building. Existing roof-to-wall anchors must meet, or shall be upgraded to meet, the minimum requirements of Section A113.1 of the 1997 UCBC Appendix Chapter 1, or new anchors meeting the minimum requirements of Section A110(a) shall be installed.
  - (e) If the building is an Historical Building, this construction shall comply with the State Historical Building Code and parapet removal may not be used as a method to mitigate External Hazards.
  - (f) No further action is required by the owner of a building covered by this section, unless one of the actions covered by Sections 145.0407, 145.0408, 145.0409, or 145.0410 occurs.

*(Amended 9-24-2002 by O-19102 N.S.)*

**§145.0411 Regulations for Remodels over 50 Percent of Building Value**

- (a) The regulations of this section apply to buildings within the scope of this division that meet the following conditions:
  - (1) The buildings are not classified in Occupancy Category I or II of Table 16-k of the 2001 California Building Code; and
  - (2) The Cumulative Value of Remodel or Renovation accumulated since January 1, 2001, excluding the cost of seismic retrofit, or the removal, stabilization, or bracing of External Hazards, exceeds 50 percent of the value of the building within any 5-year period after January 1, 2001,
    - (A) The 50 percent value shall exclude the value of any nonstructural tenant improvements made or performed after the date a building owner provides floor-to-wall and roof-to-wall anchors under this section.
    - (B) The value of the remodel is the valuation of work requiring a permit that is obtained by using the building valuation schedule administered by the building official for tenant improvements, additions, or alterations in effect at the time of permit issuance, or other evidence satisfactory to the Building Official, whichever is less.
    - (C) If unpermitted work, for which a permit was required, is discovered after January 1, 2001, the valuation of the work is obtained by using the current building valuation schedule administered by the Building Official.
- (b) The owner of a building regulated by this section shall, within 5 years after the Date of Service of an order to comply, provide floor-to-wall and roof-to-wall anchors around the perimeter of the entire building . Existing floor-to-wall and roof-to-wall anchors must meet, or shall be upgraded to meet, the minimum requirements of Section A 113.1 of the 1997 UCBC Appendix Chapter 1, or new anchors meeting those requirements shall be installed.
- (c) If the building is an Historical Building, the installation shall comply with the State Historical Building Code.

- (d) The owner may have a Structural Survey and Engineering Report prepared. Installation will not be required if the owner establishes to the satisfaction of the Building Official, through a Structural Survey and Engineering Report, that the existing anchoring system meets those requirements.

*(Amended 9-24-2002 by O-19102 N.S.)*

**§145.0412 Regulations for Historical Buildings Within the Scope of this Division**

- (a) Historical Buildings or structures as defined by Section 145.0404 shall comply with the minimum structural provisions of the State Historical Building Code (SHBC), Title 24, Part 8, California Code of Regulations. Provisions found within the SHBC for the seismic strengthening of Historical Buildings may be used to comply with this division.
- (b) Allowable stresses for archaic materials not specified in the 2001 California Building Code or Table No. A-1-E of the UCBC Appendix Chapter 1 may be based on substantiating research data or engineering judgement subject to the Building Official's satisfaction.
- (c) Alternative materials, design, or methods of construction may be approved by the Building Official in accordance with the provisions of Section 129.0109. In addition, when a request for an alternative proposed design, material, or method of construction is being considered, the Building Official may file a written request for review to the State Historical Building Safety Board for its consideration, advice, or findings in accordance with the SHBC.
- (d) Demolition of Historical Buildings may not be allowed unless the demolition complies with Chapter 14, Article 3, Division 2 (Historical Resources Regulations) and any other provisions of the Land Development Code relating to historic preservation and the State Historical Building Code, California Health and Safety Code sections 18950 through 18961.

*(Amended 9-24-2002 by O-19102 N.S.)*

**§145.0413 Authority to Issue an Order to Comply with this Division**

The Building Official may prepare and serve an order to comply with the procedures and regulations of this division to the owner of each building that is within the scope of this division.

*(Added 12-9-1997 by O-18451 N.S.; effective 1-1-2000.)*

**§145.0414 Service of the Order to Comply**

- (a) The order shall be in writing and shall be served upon the owner of the building as shown on the last equalized property tax assessment roll of the San Diego County Assessor. The order may also be served upon the person in apparent charge or control of the building. The order shall be served in person or by certified mail, postage prepaid and return receipt requested.
- (b) The date of service of the order shall be either the date that the Building Official served the order in person or the date of deposit of the order in the U.S. mail.
- (c) The Building Official may at the written request of the owner, order that the building comply with this division before the normal service date for the building.

*(Added 12-9-1997 by O-18451 N.S.; effective 1-1-2000.)*

**§145.0415 Contents of Order to Comply**

The order shall reference this division which references Sections A103 - A113.6 of Chapter 1 of the UCBC, which set forth the owner's alternatives and time limits for compliance. The order shall specify that the Building Official has determined that the building is within the scope of this division and one of the following conditions applies:

- (a) The building is an Essential or Hazardous Facility requiring compliance with Section 145.0406;
- (b) The owner is required to provide partial seismic mitigation in the form of External Hazard removal and stabilization or bracing within 5 years after the Date of Service in accordance with Section 145.0410;
- (c) The building is within the scope of this division due to the occurrence of the condition listed in Section 145.0411 that requires the owner to provide partial seismic mitigation in the form of floor-to-wall and roof-to-wall anchors within a 5-year period after the Date of Service;
- (d) The building is within the scope of this division due to occurrence of one of the conditions listed in Sections 145.0407, 145.0408, and 145.0409 that requires the owner to submit a complete Structural Survey and Engineering Report to the Building Official within 120 calendar days and, if applicable, a

Retrofit Guideline Document within 240 calendar days after the Date of Service.

*(Amended 9-24-2002 by O-19102 N.S.)*

**§145.0416 Appeal from Order to Comply**

- (a) The owner or person in charge or control of the building may appeal the Building Official's initial determination that the building is within the scope of this division or request an extension of time to a Hearing Officer appointed by the City Manager pursuant to administrative hearing regulations promulgated by the City Manager.
- (b) Any appeal in accordance with this section shall be filed with the Building Official within 90 calendar days after the Date of Service of the Order to Comply. The appeal shall be made in writing upon appropriate forms provided by the Building Official and the grounds for the appeal shall be stated clearly and concisely.
- (c) Any appeal in accordance with this section shall be decided by the Hearing Officer no later than 60 calendar days after the date that the appeal is filed unless extended for good cause and, in that case, as soon as reasonably possible thereafter. If the appeal is decided adversely to the owner, the owner shall then comply with the Building Official's order, either as provided for in the Hearing Officer's order or as specified in the original order with due allowance for the time the appeal was processed.
- (d) Other appeals or requests for determination of alternate equivalency to, minor deviations from, or interpretations of the provisions of this division shall be made in accordance with the procedures established in Section 129.0104.

*(Added 12-9-1997 by O-18451 N.S.; effective 1-1-2000.)*

**§145.0417 Enforcement of an Order to Comply**

If the owner or other person in charge or control of the subject building fails to comply with any order issued by the Building Official pursuant to this division within any of the time limits of this section, or following an appeal pursuant to Section 145.0416, the Building Official may pursue any administrative or judicial remedies provided for in Municipal Code Chapters 1 or 12. This may include an order that the entire building be vacated and remain vacated until the order has been complied with. If compliance with the order has not been accomplished within 90 calendar days after the date the building has been ordered vacated or such additional time as may have otherwise been granted, the Building Official may order its demolition in accordance

with the provisions of Chapter 12, Article 1, Division 4 (Procedures for Abatement of Unsafe, Dangerous or Substandard Structures), or by court order pursuant to the provisions of Municipal Code Chapter 1.

*(Added 12-9-1997 by O-18451 N.S.; effective 1-1-2000.)*

**§145.0418 Preparation and Content of a Structural Survey and Engineering Report**

- (a) The purpose of a Structural Survey and Engineering Report is to investigate and evaluate, in a thorough and unambiguous fashion, a building's structural systems that resist the forces imposed by earthquakes and to determine if any individual portion or combination of these systems is inadequate to prevent a structural failure (collapse or partial collapse).
- (b) A Structural Survey and Engineering Report shall mean the investigation and subsequent preparation of a report which addresses the existence nature and extent of structural deficiencies that could result in collapse or partial collapse of a building and the existence, nature, and extent of deficiencies in the anchoring of External Hazards.
- (c) When required, a Structural Survey and Engineering Report shall be submitted to the Building Official within 120 calendar days after the Date of Service.
- (d) The Structural Survey and Engineering Report shall investigate and analyze buildings within the scope of this division as individual cases without comparison to similar type or age buildings. Generalities or stereotypes are to be avoided in the evaluation process by focusing on the specifics of the structural system of the building in question and the local geology of the land on which the building is constructed.
- (e) If the building is an Historical Building, all items listed in the Structural Survey and Engineering Report requiring mitigation shall be thoroughly addressed under the provisions of the State Historical Building Code.

*(Added 12-9-1997 by O-18451 N.S.; effective 1-1-2000.)*

**§145.0419 Who May Prepare a Structural Survey and Engineering Report**

A Structural Survey and Engineering Report shall be prepared by a civil or structural engineer or architect licensed by the State of California.

*(Added 12-9-1997 by O-18451 N.S.; effective 1-1-2000.)*

**§145.0420 Level of Investigation**

Some buildings will require extensive testing and field investigation to uncover potential structural deficiencies, while others will allow the same level of overall evaluation by a less complicated process due to simplicity of design or the availability of original or subsequent alteration design and construction documents . The level of investigation must be sufficient to produce a report that is complete and can serve as a sound basis for a conclusion on the collapse or partial collapse hazard a building may present.

*(Added 12-9-1997 by O-18451 N.S.; effective 1-1-2000.)*

**§145.0421 Format of Report**

The report shall contain, at a minimum, the following information:

- (a) General Information . A description of the building including:
  - (1) Street address.
  - (2) Character of use or occupancy with plans indicating the square footage of each use.
  - (3) Plans and elevations showing the location, type, and extent of lateral force-resisting elements in the building, both horizontal and vertical.
  - (4) A description of the construction materials used in the structural elements and information regarding their present condition.
  - (5) The date of original construction, if known, and the date of any subsequent additions or substantial structural alterations, if known.
  - (6) The name and address of the original designer and contractor, if known, and the name and address of the designer and contractor for any subsequent additions or structural alterations, if known.
- (b) Investigation and Evaluation of Structural Systems. All items to be investigated and the methods of investigation for each type of building under consideration.
- (c) Test Reports. All field and laboratory test results . Evaluation of the significance of these test results shall be made with regard to each structural system or typical connection being evaluated . This evaluation may be limited



to a statement of the adequacy or inadequacy of the system or connection based on the lateral load demand it would be required to resist by calculation . If tests reveal inadequacy, a conceptual solution must be included in the report.

- (d) Conclusions. Based on the demand/capacity ratio and the specific evaluation items, a statement shall be provided explaining the overall significance of the deficiencies found to exist in the building's lateral force-resisting system regarding potential collapse or partial collapse failure.
- (e) Recommendations. An appropriate solution that could be used to strengthen the structure to alleviate any collapse or partial collapse threat shall be specified.

*(Added 12-9-1997 by O-18451 N.S.; effective 1-1-2000.)*

**§145.0422 Exceptions and Alternatives to Content of Report**

Exceptions to the specific items required to be included in the Structural Survey and Engineering Report may be granted by the Building Official upon review of a written request from the engineer or architect preparing the report. The request shall provide evidence that adequate information concerning the required items can be determined by alternate means or that a conclusion can be made about the item without following the solution called for in this division. The purpose of granting exceptions shall be to reduce the costs of disruption that would result from taking required actions when it can be shown that they are unnecessary to provide information available by equivalent means. In no case will an exception be granted that would result in an item not being completely evaluated.

*(Added 12-9-1997 by O-18451 N.S.; effective 1-1-2000.)*

**§145.0423 Review and Availability of Structural Survey and Engineering Report**

- (a) The Building Official will review the submitted Structural Survey and Engineering Report for compliance with the requirements of this division.
- (b) The cost of this review shall be covered by a fee assessed from the building owner based on the time required for review. This amount shall be credited to the plan checking fee collected for any future mitigation of structural inadequacies specified in the Structural Survey and Engineering Report.

- (c) Copies of the Structural Survey and Engineering Report shall be made available to the public for a standard fee or may be reviewed at the Development Services Department.

*(Added 12-9-1997 by O-18451 N.S.; effective 1-1-2000.)*

**§145.0424 Retrofit Guideline Document**

When a Retrofit Guideline Document is required, it shall be submitted within 240 calendar days after the Date of Service of the Order to Comply.

*(Added 12-9-1997 by O-18451 N.S.; effective 1-1-2000.)*

**§145.0425 Regulations for Buildings of Archaic Unreinforced Masonry**

- (a) A building or structure of archaic unreinforced masonry shall comply with the provisions set forth in this section.
- (b) A qualified Historical Building may comply with the State Historical Building Code in order to fulfill the requirements of this section.
- (c) Existing or re-erected walls of adobe or stone shall conform to the following:

- (1) Exterior bearing walls of unreinforced stone masonry shall not exceed the height-to-thickness or length-to-thickness ratio, and exterior walls of unreinforced adobe masonry shall not exceed the length-to-thickness ratio, specified in Table No. A-1- B of the UCBC Appendix Chapter 1. Exterior walls of unreinforced adobe masonry shall not exceed a height-to-thickness ratio of 6 to 1 for Seismic Zone No. 3, or a ratio of 5 to 1 for Seismic Zone No. 4. The walls shall be provided with a reinforced concrete bond beam at the top that interconnects all walls. The bond beam shall have a minimum depth of 6 inches. The bond beam may have a width equal to the width of the wall less 8 inches, provided the resulting width is not less than 8 inches. Bond beams of other materials or seismic retrofit designs may be used with the approval of the Building Official.

Exterior bearing walls shall have a minimum wall thickness of 18 inches in Seismic Zone Nos. 3 and 4. Interior adobe partitions shall be a minimum of 10 inches in thickness. No adobe or stone structure may exceed one story in height unless the historic evidence, satisfactory to the Building Official, indicates a two-story height . In such cases, the height-to-thickness ratio shall be as above for the first floor based on the total two-story height and the second floor wall thickness shall not

exceed a ratio of 6 to 1. Bond beams shall be provided at the roof and second floor levels.

- (2) Foundations shall be reinforced concrete under newly reconstructed walls and shall be 50 percent wider than the wall above, soil conditions permitting, except that the foundation wall may be 4 inches less in width than the wall if a rock, burned brick, or stabilized adobe facing is necessary to provide authenticity.
- (3) New or existing unstabilized brick and adobe brick masonry shall test to 75 percent of the compressive strength required of new materials by the 1998 California Building Code, as adopted by the City. Unstabilized brick shall only be used where existing brick is unstabilized and where the building is not susceptible to flooding conditions or direct exposure . Adobe may be allowed a maximum value of 3 pounds per square inch for shear with no increase of lateral forces.
- (4) Mortar may be of the same soil composition and stabilization as the brick, in lieu of cement mortar, if cement mortar is required for new materials under the 1998 California Building Code.
- (5) Nominal tension forces due to seismic forces that are normal to the wall may be neglected if the wall meets thickness requirements and shear values allowed by this Section.
- (d) Allowable stresses for archaic materials not specified in the 1998 California Building Code, as adopted by the City or in this division shall be based on substantiating research data or engineering judgement with the approval of the Building Official.

*(Added 12-9-1997 by O-18451 N.S.; amended 12-6-1999 by O-18728 N.S.; effective 1-1-2000.)*

**§145.0426 Alternate Materials, Designs, and Methods of Construction**

- (a) Methods of analysis and design, the design values themselves, and the materials and methods of construction must be in accordance with the 2001 California Building Code, as adopted by the City, except as modified by this division.

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- (b) Alternate materials, designs, or methods of construction may be approved and their use authorized by the Building Official in accordance with the provisions of Section 129.0109.
- (c) The proposed materials, designs, or methods of construction must comply with the purposes of this division and be, for the use intended, at least the equivalent of that prescribed in this division in suitability, strength, effectiveness, fire resistance, durability, safety, and sanitation.
- (d) The Building Official may require that sufficient evidence or proof be submitted to substantiate any claims that may be made regarding the use of an alternate.

*(Amended 9-24-2002 by O-19102 N.S.)*

### §145.0427 Table of Hazard Categories and Classifications

**Table 145-05A  
Hazard Categories and Classifications**

Relative Hazard	Occupancy - Use Categories
1 (Highest hazard)	A, E, I B (Drinking and dining establishments with a total occupant load in all drinking and dining establishments in the building of 50 or more)
2	R-1
3	H, S-4, S-5 F-2 With noncombustible materials S-2 Low hazard storage
4	S-1 Gas stations, parking garages S-3 Repair garages S-1 Moderate hazard storage B, F-1, F-2, S-2, M
5 (Lowest hazard)	R-3, U

*(Added 12-9-1997 by O-18451 N.S.; effective 1-1-2000.)*